

CLAIMS

1. Method of controlling a mode of reporting of measurements made on a radio interface between a mobile
5 terminal and a cellular radio network infrastructure, the infrastructure comprising at least one radio network controller and fixed transceivers, the method comprising the following steps:
- measuring parameters of radio propagation between
10 the mobile terminal and at least one of the fixed transceivers;
 - transmitting to the radio network controller report messages indicating at least a part of the measured parameters, in accordance with a mode of
15 reporting specified by the radio network controller;
 - obtaining an estimate of speed of movement of the mobile terminal at the radio network controller; and
 - 20 - processing the report messages at the radio network controller so as to determine, by taking account of the said estimate of speed, a mode of reporting to be specified for a part at least of the report messages.
- 25
2. Method according to Claim 1, in which the speed estimate is calculated on the basis of the radio propagation parameters measured, and is included in a report message so as to be obtained at the radio
30 network controller.
3. Method according to Claim 1, in which the determination of the mode of reporting comprises the selection between a periodic transmission of the report
35 messages and a transmission of the report messages upon event detection.
4. Method according to Claim 3, in which the periodic transmission of the report messages is favoured with

respect to the transmission of the report messages upon event detection when the estimate of the speed of movement of the mobile terminal is greater than a threshold.

5

5. Method according to Claim 1, in which the determination of the report mode comprises, in the case of a periodic transmission of the report messages, the selection of the period of transmission of the said
10 messages.

6. Method according to Claim 5, in which the period of transmission selected is a decreasing function of the estimate of the speed of movement of the mobile
15 terminal.

7. Method according to Claim 1, in which the determination of the report mode comprises, in the case of a transmission of the report messages upon event
20 detection, the selection of the event whose detection gives rise to the transmission of one of the said messages.

8. Method according to Claim 7, in which the event
25 selected has a probability of occurrence which is an increasing function of the estimate of the speed of movement of the mobile terminal.

9. Method according to Claim 1, in which certain at
30 least of the measured parameters indicated in the report messages for at least one fixed transceiver comprise data representative of a temporal variability of an energy level received over the channel between the mobile terminal and the said fixed transceiver.

35

10. Method according to Claim 9, in which the processing of the report messages to determine the report mode takes account moreover of the said data representative of the temporal variability.

11. Method according to each of Claims 3 and 10, in which the periodic transmission of the report messages is favoured with respect to the transmission of the
5 report messages upon event detection when the temporal variability of the energy level is greater than a threshold.

12. Method according to each of Claims 3 and 10, in
10 which the periodic transmission of the report messages is favoured with respect to the transmission of the report messages upon event detection when the temporal variability of the energy level is increasing.

13. Method according to each of Claims 5 and 10, in
15 which the period of transmission selected is a decreasing function of the temporal variability of the energy level.

14. Method according to each of Claims 7 and 10, in
20 which the event selected has a probability of occurrence which is an increasing function of the temporal variability of the energy level.

15. Method according to Claim 1, in which the
25 measurement of the radio propagation parameters is at least in part performed in the mobile terminal, the report message comprising upgoing messages sent by the mobile terminal to the infrastructure of the network.

16. Method according to Claim 1, in which the
30 measurement of the radio propagation parameters is at least in part performed in one of the fixed transceivers, the report messages comprising messages
35 sent by the said fixed transceiver to the radio network controller.

17. Method according to Claim 1, in which the processing of the report messages to determine the

report mode takes account moreover of a service whose scope encompasses a communication between the mobile terminal and at least one of the said fixed transceivers.

5

18. Radio network controller for a cellular radio network infrastructure, comprising :

- means for receiving report messages indicating radio propagation parameters measured between a mobile terminal and at least one fixed transceiver of the infrastructure, the report messages being transmitted in accordance with a mode of reporting specified by the radio network controller;
- means for obtaining an estimate of speed of movement of the mobile terminal; and
- means for processing the report messages so as to determine, by taking account of the said estimate of speed, a mode of reporting to be specified for a part at least of the report messages.

20

19. Radio network controller according to claim 18, in which the means for obtaining an estimate of speed of movement of the mobile terminal comprise means for calculating said speed estimate on the basis of the radio propagation parameters measured, and means for receiving a report message including said speed estimate.

25

20. Radio network controller according to claim 18, in which the means for processing the report messages so as to determine a mode of reporting comprise means for selecting between a periodic transmission of the report messages and a transmission of the report messages upon event detection.

35

21. Radio network controller according to claim 20, in which the means for selecting between a periodic transmission of the report messages and a transmission of the report messages upon event detection favour the

periodic transmission of the report messages with respect to the transmission of the report messages upon event detection when the estimate of the speed of movement of the mobile terminal is greater than a threshold.

22. Radio network controller according to claim 18, in which the means for processing the report messages so as to determine a mode of reporting comprise, in the case of a periodic transmission of the report messages, means for selecting the period of transmission of the said messages.

23. Radio network controller according to claim 22, in which the period of transmission selected is a decreasing function of the estimate of the speed of movement of the mobile terminal.

24. Radio network controller according to claim 18, in which the means for processing the report messages so as to determine a mode of reporting comprise, in the case of a transmission of the report messages upon event detection, means for selecting the event whose detection gives rise to the transmission of one of the said messages.

25. Radio network controller according to claim 24, in which the event selected has a probability of occurrence which is an increasing function of the estimate of the speed of movement of the mobile terminal.

26. Radio network controller according to claim 18, in which certain at least of the measured parameters indicated in the report messages for at least one fixed transceiver comprise data representative of a temporal variability of an energy level received over the channel between the mobile terminal and the said fixed transceiver.

27. Radio network controller according to claim 26, in which the means for processing the report messages to determine the report mode take account moreover of the said data representative of the temporal variability.

28. Radio network controller according to each of Claims 20 and 27, in which the means for selecting between a periodic transmission of the report messages and a transmission of the report messages upon event detection favour the periodic transmission of the report messages with respect to the transmission of the report messages upon event detection when the temporal variability of the energy level is greater than a threshold.

29. Radio network controller according to each of Claims 20 and 27, in which the means for selecting between a periodic transmission of the report messages and a transmission of the report messages upon event detection favour the periodic transmission of the report messages with respect to the transmission of the report messages upon event detection when the temporal variability of the energy level is increasing.

30. Radio network controller according to each of Claims 22 and 27, in which the period of transmission selected is a decreasing function of the temporal variability of the energy level.

31. Radio network controller according to each of Claims 24 and 27, in which the event selected has a probability of occurrence which is an increasing function of the temporal variability of the energy level.

32. Radio network controller according to Claim 18, in which the measurement of the radio propagation parameters is at least in part performed in the mobile

terminal, the report message comprising upgoing messages sent by the mobile terminal to the infrastructure of the network.

5 33. Radio network controller according to Claim 18, in which the measurement of the radio propagation parameters is at least in part performed in one of the fixed transceivers, the report messages comprising
10 messages sent by the said fixed transceiver to the radio network controller.

34. Radio network controller according to Claim 18, in which the means for processing the report messages to determine the report mode take account moreover of a
15 service whose scope encompasses a communication between the mobile terminal and at least one of the said fixed transceivers.

20